ORIGINAL

Investigating the relationship between job stress and coronary mental health (Covid Virus 19) in Iranian companies and families

Investigación de la relación entre el estrés laboral y la salud mental coronaria (virus Covid 19) en empresas y familias iraníes

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Abstract

The **main** purpose of this study was to investigate the relationship between job stress and coronary artery health (Covid virus 19) in Iranian companies and families.

Methods: 241 employees (214 males and 27 females) were selected from the employees of Iranian companies using Cochran's formula by stratified random sampling method and using the Helrigel job stress questionnaire. And Slocum, the Stress Response Styles Questionnaire (CISS) and the Goldberg - Hiller General Health Questionnaire (GHQ-28) were evaluated. The obtained data were statistically evaluated using path analysis method.

Results: The findings showed that job stress and its dimensions are able to predict changes related to mental health as well as problem-oriented and emotion-oriented coping strategies of the subjects. The findings also confirmed the mediating role of coping with problem-oriented and coronary-induced stress in the relationship between job stress and mental health.

Conclusions: According to the findings, mental health can be improved by increasing problem-oriented strategy by teaching the use of these types of strategies as well as reducing emotion-oriented strategies.

Keywords: Covid-19, Job stress, mental health, coping strategies, employees.

Resumen

El **objetivo** principal de este estudio era investigar la relación entre el estrés laboral y la salud arterial coronaria (virus Covid 19) en empresas y familias iraníes

Metodología: Se seleccionaron 241 empleados (214 hombres y 27 mujeres) de entre los empleados de las empresas iraníes mediante la fórmula de Cochran por el método de muestreo aleatorio estratificado y utilizando el cuestionario de estrés laboral de Helrigel Además, se evaluaron el Cuestionario de Estilos de Respuesta al Estrés (CISS) y el Cuestionario de Salud General de Goldberg y Hiller (GHQ-28). Los datos obtenidos se evaluaron estadísticamente mediante el método de análisis de trayectorias.

Resultados: Se observó que el estrés laboral y sus dimensiones son capaces de predecir los cambios relacionados con la salud mental, así como las estrategias de afrontamiento orientadas a los problemas y a las emociones de los sujetos. Los resultados también confirmaron el papel mediador del afrontamiento del estrés orientado a los problemas y del estrés inducido por las emociones en la relación entre el estrés laboral y la salud mental.

Conclusiones: Según los resultados, la salud mental puede mejorarse aumentando la estrategia orientada a los problemas mediante la enseñanza del uso de este tipo de estrategias, así como reduciendo las estrategias orientadas a las emociones.

Palabras clave: Covid-19, estrés laboral, salud mental, estrategias de afrontamiento, empleados.

Introduction

Epidemic and new virus control

The corona virus family is becoming a global health crisis. The various aspects of the virus are still unknown to the public. This study aims to introduce the general aspects of this virus. This study is a narrative review that uses the keywords COVID-19 and New Coronavirus 2019 to review available texts. Published articles from 1/20/2020 to 3/3/2020 were reviewed. PubMed and Google Scholar are mainly used in the search. Free search in Google search engine is used to collect background information[1-3].

Aspects of prevalence, control and prevention of the disease were studied and presented. This study showed that the routes of transmission of Covid-19 virus are through respiratory droplets and direct contact with secretions containing the virus. One of the causes of the uncontrollable and surprising prevalence of this disease is the long incubation period of its cause and how it is transmitted in these asymptomatic, mild or pre-emergence periods of the disease. Undoubtedly, in today's society, it is not possible to live without a job, and every person needs to have a job in order to join the social organization and find a place and status in society. However, work is not only a way to meet the essential needs of life, but also a vital element in the social status of individuals[4-6].

However, people's jobs are one of the main causes of stress in their lives. For each person, job is considered as a component of social identity, a source of living needs and a component of social identity, and is an important source of stress. There is more tension in jobs in which human communication is important[7-9]. Job stress has become a common and costly problem in the workplace today[10-12]. Almost all thinkers acknowledge that stress is the result of an interaction between a person and a situation in which the individual considers his or her ability to respond to demands and insufficient pressure, so that the National Institute for Occupational Safety and Health (1999) treats job stress. Defines a person as harmful physical and emotional responses when working conditions do not match the abilities, facilities available, or needs of the workforce.

Job stress is one of the stresses that, if excessive, can endanger a person's health by causing physical, psychological and behavioral complications. Also, the existence of these pressures, by threatening organizational goals, can reduce the quality of individual performance[13-15].

Organizational consequences of stress are decreased performance, increased absenteeism, resignations, decreased organizational commitment and job insecurity of employees, etc. (Francois, 2008). Extensive research shows that there is a lot of job stress and physical and mental analysis in employees, which leads to dismissal from work, clashes between employees and severe displacement, health disorders and inability to perform tasks, vulnerability in professional communication, decreased quality of care provided and ultimately dissatisfaction and leaving the job[16-19]. In several studies on the effect of job stress on mental health job stress has been introduced as one of the most important causes of mental injuries and reduced mental health in most of these studies, stress is considered as a response that is experienced directly under the influence of stress sources.

But it is important to emphasize that stress does not always come directly from stressful sources, but how a person perceives stress in their experience, because studies have shown that stressful events. Similarly, they produce different effects in different people. Hence, the belief that there are variables that modulate the relationship between stress and mental health has been reinforced. Efficient manpower is the richest and most valuable wealth and property of any country. Many societies, despite having abundant natural resources, are not able to use these divine gifts due to the lack of qualified human resources. Efficient human resources are those who, while having knowledge and skills, have the necessary abilities to perform adequate and effective job tasks with mental health[20-22].

Mental health has been defined as a balanced and coordinated behavior with society, recognizing and accepting social realities, the ability to adapt to them and satisfy one's balanced needs[25].

In this regard, the World Health Organization (WHO) (2005) considers mental health to be a balance between different aspects of life, global, social, spiritual, spiritual and emotional, and the way we manage our environment and to the life we decide is of particular importance.

Mental health is a state of functioning and successful mental activity that results in fruitful activities, satisfying relationships with others, the ability to adapt to change, and coping with adversity. Promoting mental health in the community improves the quality of life. According to the World Health Organization, 1 in 4 people (25%) suffer from one or more mental disorders at any stage of life. According to the US Centers for Disease Control (CDC), 7.8 percent of men and 12.3 percent of women between the ages of 18 and 24 suffer from mental health problems, especially stress. Characteristics of people with mental health include self-awareness, self-motivation, aspirations, and environment. In Iran, this statistic is not less than other countries; So that in the National Plan for the Study of Health and Disease in Iran, the average of disorders in people over 15 years of age in Iran was reported to be 21%. The World Health Organization also estimates that mental illness, including stress related to

mental disorders, will be the second leading cause of disability by 2020. However, several studies conducted in different occupational groups have shown a significant relationship between mental health and job satisfaction; In a way, people with less job satisfaction had less mental health[26-29]. One of the factors that can affect people's mental health is job stress. People who suffer from a lot of stress pay less attention to their work and therefore may harm themselves and others in the organization.

Holmes (2002) considers one of the factors affecting the performance of individuals in organizations is job stress, which puts the mental health of many people at risk. Therefore, in the last decade, the issue of stress and its effects in the organization has become one of the main issues of organizational behavior[30]. Job stress occurs when expectations of a person are greater than his or her powers and abilities. When a person is deprived of the opportunity to show creativity, decision-making, and tact in the workplace, he or she experiences stress, which ultimately leads to reduced efficiency; This is one of the major problems and threats to human health in modern societies[31-33].

Most studies that have examined job stress have shown that the labor force exposed to job stress in developed countries is about 30%, which is much higher in developing countries[16]. There is evidence that stress can also affect individual health and important organizational outcomes such as productivity[36-40]. Job dissatisfaction is a consequence of job stress and will have economic and social costs for the individual[41]. Job stress also increases productivity, reduces absenteeism, reduces productivity, relocates, labor conflicts, medical expenses, disability, and hires new staffing costs. There is an exaggeration of organizations and companies[42].

The International Labor Organization (ILO) estimates that the cost to countries due to job stress is 1 to 3.5 percent of GDP and announces that this amount is increasing[43]. Therefore, by identifying and modifying the stressors of the workplace, it is possible to prevent the development of mental illness in this group of people and prevent the costs imposed by it.

On the other hand, Linden (2005) believes that stress management increases people's ability to reduce stress and adapt properly to stressful situations. One way to mitigate the destructive effects of job stress is to look at the ways in which job stress affects mental health. One of these ways is coping strategies with stressful events through which job stress seems to target the mental health of the employed person. Stress coping techniques are the process by which people take control of issues caused by stress and negative emotion[44-46].

Coping strategies are a set of cognitive and behavioral efforts that are used to interpret and correct a stressful situation and reduce the suffering caused by it[47]. The three main coping strategies are: Emotional coping strategies, which include efforts to regulate the emotional consequences of a stressful event and maintain emotional balance by controlling the emotions resulting from the stressful situation; Problem-oriented coping strategy involves constructive actions of the individual in relation to stressful situations and tries to eliminate or change the source of stress; And avoidant coping strategies include actions in which the individual tries to avoid the stress factor[48-50].

In the field of the relationship between mental health and coping strategies, it can be said that mental health in a two-way interaction on the one hand is the result of selecting and using coping strategies effective and commensurate with change and stress, and on the other hand It is the foundation of a healthy psychological atmosphere in the light of which it is possible to correctly recognize and evaluate the stressful situation in order to choose an effective coping strategy. Health psychology attaches great importance to the role of coping strategies in how physical and mental health is[51].

Table I: Frequency distribution and mean age of the subjects by gender.

Standard deviation of age scores	Age average	Abundant	Gender
5/77	41/65	214	**Men**
4/95	40/85	27	**Female**
5/68	41/56	241	**Total**

Figure 1: Frequency distribution and mean age of the subjects by gender.
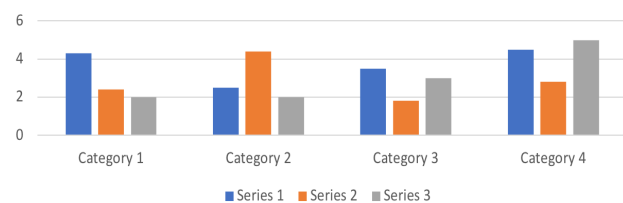
Data Collection Tools

Measurement and data collection tools in this study are: Hellerigel - Slocom (2000) Occupational Stress Questionnaire, CISS (1990) and Goldberg - Hiller General Health Questionnaire information on each of which is provided separately below[52-55].

Hellergel and Slocom Job Stress Questionnaire

The Job Stress Assessment Questionnaire was developed by Helrigal and Slocum (2000) and measures

a person's level of job stress. This questionnaire has 3 factors of physical environment, job conflict and role ambiguity, each factor has 3, 4 and 3 questions, respectively. This questionnaire has five options including "always", "usually", "sometimes", "rarely" and "never". The scoring method of this questionnaire is as follows: To sum up the scores, the option "Always" is given a score of 10, "Usually" a score of 8, "Sometimes" 6, "Rarely" a score of 4 and "Never" a score of zero. To take. The scoring of the questionnaire for the agents is obtained by adding the scores of the questions of each agent and for the whole questionnaire the sum of the scores of the agents. The score range in this questionnaire is 0 to 100 [56-60].

Achieving a high score in this questionnaire indicates excessive stress in the job and low job satisfaction. The interpretation of the scores obtained from this questionnaire is such that for each factor, a score of 8-10 indicates that a lot of attention should be paid to the improvement of the factor, and for the whole questionnaire, a total score of 74 or more indicates that the stress level is higher. It is optimal, job satisfaction is low, the tendency to underemployment and absenteeism is also high[61-63].

The questionnaire is designed based on strong theories and based on the opinions of two famous management thinkers, has a high formal validity and content[64]. In a study by Hassanzadeh (2008), its reliability was calculated to be 0.84. In the research of Hassanzadeh, Shirbeigi and Olizadeh (2012), the reliability of the questionnaire is 0.82 Bust Amo, which is a desirable and satisfactory coefficient. In the present study, internal consistency coefficients were obtained by Cronbach's alpha method for 0.78 questionnaire[65].

Stress Management Incident Questionnaire (CISS)

This questionnaire was developed by Parker and Andler (1990) to assess the coping patterns of individuals (adolescents and adults) in stressful and critical situations. They first administered a questionnaire consisting of 70 items to 599 male and female students. Respondents were asked to consider a personal crisis or stressful event they had recently experienced and to complete the questionnaire items according to how they dealt with it. Then, using factor analysis, they interpreted the data and extracted three major coping methods. Problem-oriented confrontation, emotion-oriented confrontation and avoidance-oriented confrontation[66].

Packer and Andler (1990) revised the questionnaire and reduced it to 66 items. The questionnaire was then administered to 394 students and 284 adults, and finally, after factor analysis of the data, it was reduced again to

48 items. The CISS questionnaire with 48 items is one of the reliable tools for measuring crisis management methods. Are considered stressful events. Each coping method has a separate scale with 16 items[67].

The Avoidance Coping Scale has two subscales: community-oriented, activity-oriented, and problem-oriented coping. Which a person uses to control, eliminate, or reduce unpleasant external or internal stimuli. These methods focus on the problem itself or the unpleasant stimulus. Emotion-oriented coping method: This method is the escape and (physical) distance of the person from the stress factor. Parker and Andler (1990) reported the internal consistency of the questionnaire from 41% to 66%. Agham Mohammadian et al. (1999) in their study on 100 students (50 girls and 50 boys) of Ferdowsi University of Mashhad. Credit and validity were reported by 73%.

Also, Hosseini Tabatabai (1998) obtained Cronbach's alpha coefficient for problem-oriented coping strategies 0.81 and 0.78, respectively. In the present study, Cronbach's alpha internal consistency coefficients for scales of coping strategies of problem-oriented, emotion-oriented and avoidance-oriented and subscales of turning to activities and turning to community, respectively / 75 0, 0.87, 0.73, 0.82 and 0.59 were obtained[68].

Research Method

To conduct this research, first by referring to and obtaining the necessary permits and agreements to conduct the research, the samples are randomly classified from among the employees working in the field of human resources, improving crop production, improving production. Animal and Deputy Minister of Planning and Economic Affairs were elected. After that, by providing the necessary explanation about the purpose of the research and obtaining the consent of the research units, the researcher was present at one of the low office hours at the employees' workplace and provided them with questionnaires. All research units completed the questionnaires with the knowledge that participation in research is optional and will not have any effect on their work process, including promotion or demotion. In the next step, the scoring questionnaires were statistically analyzed.

Method of statistical analysis of data

In analyzing the data of this research, two software's, SPSS-19 and AMOS-20, have been used. SPSS-19 software is used to describe and analyze raw data and regression analysis simultaneously and to determine the fit of the studied model from the structural equation model in AMOS-20 software to analyze the path of observation variables. Exploitation was performed using correlation

matrix. The results of this analysis will come in the next chapter. The maximum likelihood method was used to determine the fit of the model. It should be noted that there are several indicators to estimate the good fit of the overall model. These include chi-square indices, good fit index (GFI), adjusted good fit index (AGFI), mean square root remainder (RMR), and barbell index (CN). The chi-square index is strongly affected by the sample size, so in models with a sample size greater than 200, the null hypothesis is rejected. Therefore, model fit will usually not be verified. In such studies, it is used to compare the fit of the model with a random model[68].

In this study, the chi-square index will be reported, but the criterion for fitting the model will be other indicators in question. It should be noted that all calculations in this study were performed by statistical software with a statistical inference limit of P <0.05. Descriptive findings related to research variables **table II** shows the mean, standard deviation and range of scores observed by the research subjects in the variables (coping styles, job stress and mental health)[69].

Correlation matrix of research variables **table III** shows the zero-order correlation matrix of the variables of the studied model. Significance levels and the relationship between exogenous, mediating and endogenous variables can show a linear relationship between the variables under study. The existence of these relationships allows path analysis in the model studied in this study.

Path analysis findings

In the continuation of this section, the findings of the path analysis of sub-models and the final research model will be examined. In the study of model paths, β coefficients are the path coefficient index that is shown on the path arrows. Obviously, the paths leading to the endogenous variable will form an equation, in which the variance of the error of each equation or the residual values are also given to the variables. Below each equation, the indices R and R2, or in other words, the amount of variance explained by the predictor variables, are presented. It should be noted that at each stage, the research hypotheses as well as the proposed model that was presented in the second chapter will be examined. At the end of each section, there will be other findings that may result from data analysis in addition to the assumptions made[70].

Predicting mental health based on job stress

In order to investigate the predictive role of job stress on the mental health of the subjects, linear regression analysis was used in a simultaneous manner. The results of the analyzes are shown in **tables IV** and **V**.

As can be seen in **table VI**, based on the obtained results, the observed F value is significant (P = 0.0005) and can be 6.4% (R2adj = 0.064) variance of the subject's mental health variable. Explained through job stress. Therefore, it is concluded that job stress can predict changes in subjects' mental health. According to the results obtained

Table II: Mean, standard deviation and range of scores of the studied variables.

Scope range		The standard	Average	Variable
Max	Min	deviation		
55	7	8/56	33/84	Problem-oriented coping methods
66	9	10/43	37/68	Emotional coping style
60	29	6/65	42/29	Avoidance-oriented coping methods
18	1	14/14	9/60	Physical environment stress
24	4	4/56	11/39	Job Conflict Stress
21	4	3/03	9/51	Stress ambiguity role
48	13	8/10	30/49	Job stress (total score)
61	7	10/62	26/13	Mental health

Table III: Zero-order correlation matrix between research variables.

Variables	1	2	3	4	5	6	7	8
1. Dealing with problem-oriented	1							
2. Exciting coping	**222/0-	1						
3. Avoiding confrontation	**264/0	**185/0	1					
4. Physical environment stress	**241/0-	**358/0	011/0	1				
5. Stress of job conflict	**208/0-	**223/0	009/0-	**360/0	1			
6. Role ambiguity stress	**355/0-	**165/0	116/0-	084/0	103/0	1		
7. Job stress	**373/0-	**370/0	042/0-	**745/0	**785/0	**474/0	1	
8. Mental health	**306/0-	**279/0	009/0-	*125/0	**200/0	**226/0	**261/0	1

Table IV: Results of analysis of variance (ANOVA) for predicting mental health based on job stress.

Source of Dispersion	Total Squares	df	Average Square	R	R2adj	F	P
Regression	97/1839	1	97/1839	261/0	064/0	423/17	0005/0
Left over	78/25239	239	61/105				
Total	75/27079	240	-				

Table V: Regression analysis coefficients for predicting subjects' mental health based on job stress.

Criterion variable	Predictive Variables	B	β	t	P
Mental Health	Job Stress	342/0	261/0	174/4	0005/0

Table VI: Results of analysis of variance (ANOVA) for predicting mental health based on job stress dimensions.

Source of dispersion	Total Squares	df	Average Square	R	R^2_{adj}	F	P
Regression	59/2291	3	86/763	291/0	073/0	303/7	0005/0
Left Over	16/24788	237	59/104				
Total	75/27079	240	-				

Table VII: Regression analysis coefficients for predicting job satisfaction of subjects based on job stress dimensions.

Criterion variable	Predictive Variables	B	β	t	P
Mental health	Physical environment stress	127/0	050/0	744/0	457/0
	Job Conflict Stress	375/0	161/0	413/2	017/0
	Stress ambiguity role	718/0	205/0	274/3	001/0

Table VIII: Results of analysis of variance (ANOVA) for predicting coping strategies based on job stress.

Variable property	Source of dispersion	Total squares	df	Average square	R	R^2_{adj}	F	P
Problem-oriented strategy	regression	86/2447	1	86/2447	373/0	136/0	647/38	0005/0
	left over	15/15138	239	34/63				
	Total	01/17586	240	-				
Excitement strategy	regression	73/3579	1	73/3579	370/0	134/0	982/37	0005/0
	left over	03/22525	239	25/94				
	Total	75/26104	240	-				
Circuit avoidance strategy	regression	15/19	1	15/19	042/0	002/0-	432/0	512/0
	left over	52/10596	239	34/44				
	Total	**67/10615**	**240**	-				

Table IX: Regression analysis coefficients to predict subjects' coping strategies on job stress.

Criterion variable	Predictive variables	B	β	t	P
Problem-oriented strategy	Job stress	394/0-	373/0-	217/6-	0005/0
Excitement strategy	Job stress	477/0	370/0	163/6	0005/0
Circuit avoidance strategy	Job stress	035/0-	042/0-	657/0-	512/0

in **table VI**, job stress with a beta coefficient (β = 0.261) and a significant level (P = 0.0005) is able to predict mental health (confirmation of the first hypothesis). As can be seen, job stress has a negative effect on mental health (it should be noted that the higher the score in the mental health questionnaire, the lower the mental health). In order to investigate which of the dimensions of job stress can predict mental health, multiple regression analysis was used in a simultaneous manner. The results of the analyzes are shown in **tables VI** and **VII**.

As shown in **tables VII**, based on the results, the amount of F observed is significant (P = 0.0005) and can be 7.3% (R2adj = 0.073) of the variance of the variable mental health of the subjects through Explained the dimensions of job stress. Therefore, it is concluded that the dimensions of job stress are able to predict changes related to the mental health of the subjects. According to the results in **table IV-VI**, physical environment stress with a beta coefficient of equal (β = 0.050) and a significant level (P = 0.457) is not able to predict mental health. Job stress conflict with beta coefficient (β = 0.161) and significance level (P = 0.017) can predict the mental health of subjects. Also, the role of role ambiguity stress with a beta coefficient (β = 0.205) and a significant level (P = 0.001) is able to predict the mental health of subjects. As can be seen, the dimensions of job stress have a

negative effect on mental health (it should be noted that the higher the score in the mental health questionnaire, the lower the mental health)[36].

Predicting coping strategies based on job stress

In order to investigate the predictive role of job stress on the level of coping strategies of the subjects, multiple regression analysis was used in a simultaneous manner. The results of the analyzes are shown in **tables VIII** and **IX**.

As can be seen in **table VIII**, based on the results, the observed F value is significant for the criterion variables of problem-oriented strategies (P = 0.0005) and emotion-oriented (P = 0.0005). But the observed F value is not significant for the avoidance strategies variable (P = 0.512). According to the findings, 13.6% (R2adj = 0.136) of variable variance of problem-oriented strategies can be explained through job stress; It is also possible to explain 13.4% (R2adj = 0.134) of the variance of variable emotion-driven strategies through job stress; Therefore, it can be concluded that job stress is able to predict changes related to problem-oriented and emotion-oriented strategies, but does not have the power to predict avoidance-oriented strategies.

According to the results in **table IX**, job stress with a beta coefficient of equivalent (β = -0.373) and a significant level (P = 0.0005) is a negative predictor of problem-oriented strategies with a coefficient. Equivalent beta (β = 0.370) and significance level (P = 0.0005) are positive predictors of emotion-driven strategies.

As can be seen, job stress has a negative effect on problem-oriented strategy and a positive effect on emotion-oriented strategy. In order to investigate which of the dimensions of job stress can predict coping strategies, multiple regression analysis was used in a simultaneous manner. The results of the analyzes in **tables X** and **XI**.

As can be seen in **table X**, based on the results, the observed F value is significant for the criterion variables of problem-oriented strategies (P = 0.0005) and emotion-oriented strategies (P = 0.0005). But the observed F value is not significant for the avoidance strategies variable (P = 0.347). According to the findings, 17.2% (R2adj = 0.172) of variable variance of problem-oriented strategies can be explained through the dimensions of job stress; Also, 14.4% (R2adj = 0.144) of the variance of emotion-driven strategies can be explained through the dimensions of job stress.

According to the results in **table XI**, physical environment stress with equivalent beta coefficient (β = -0.174) and significance level (P = 0.006) can predict the problem-oriented coping strategy. Job stress conflict with beta coefficient (β = -0.111) and significance level (P = 0.079) is not able to predict the problem-oriented coping strategy. Also, the role of role ambiguity stress with equal beta coefficient (β = -0.232) and significance

level (P = 0.0005) is able to predict the problem-oriented coping strategy. Physical environment stress with a beta coefficient (β = 0.312) and a significant level (P = 0.0005) is able to predict the strategy of emotional coping. Stress of job conflict with equivalent beta coefficient (β = 0.098) and significance level (P = 0.129) is not able to predict emotion coping strategy. Also, the role of role ambiguity stress with equal beta coefficient (β = 0.129) and significance level (P = 0.034) is able to predict the strategy of emotional coping. Also, physical environment stress with equivalent beta coefficient (β = 0.023) and significance level (P = 0.739); Stress of job conflict with equivalent beta coefficient (β = -0.0000) and significance level (P = 0.939) and role ambiguity stress with equivalent beta coefficient (β = -0.117) and significance level (P = 0.073) Are unable to predict avoidance-oriented coping strategies. As can be seen, the dimensions of job stress have a negative effect on coping strategies and a positive effect on emotional strategies[37].

Predicting mental health based on coping strategies with job stress management

In order to investigate the predictive role of coping strategies on the mental health of subjects with job stress control, multiple regression analysis in a simultaneous manner was used.

As shown in **tables XII** based on the obtained results, the amount of F is significant (P = 0.0005) and can be 13.5% (R2adj = 135.135) variance of variable mental health of subjects through Explained problem-solving, emotion-oriented, avoidance-oriented, and job-stress

Table X: Results of Analysis of variance (ANOVA) for predicting coping strategies based on job stress dimensions.

Variable property	Source of dispersion	Total squares	df	Average square	R	R^2_{adj}	F	P
Problem-oriented strategy	regression	76/3202	3	59/1067	427/0	172/0	591/17	0005/0
	left over	25/14383	237	69/60				
	Total	01/17586	240	-				
Excitement strategy	regression	87/4041	3	29/1347	393/0	144/0	473/14	0005/0
	left over	88/22062	237	09/93				
	Total	75/26104	240	-				
Circuit avoidance strategy	regression	73/146	3	91/48	118/0	001/0	107/1	347/0
	left over	93/10468	237	17/44				
	Total	67/10615	240	-				

Table XI: Regression analysis coefficients for predicting subjects' coping strategies on the dimensions of job stress.

Variable property	Predictive variables	B	β	t	P
Problem-oriented strategy	Physical environment stress	359/0-	174/0-	755/2-	006/0
	Job Conflict Stress	209/0-	111/0-	763/1-	079/0
	Stress ambiguity role	931/0-	329/0-	570/5-	0005/0
Excitement strategy	Physical environment stress	786/0	312/0	873/4	0005/0
	Job Conflict Stress	224/0	098/0	523/1	129/0
	Stress ambiguity role	443/0	129/0	138/2	034/0
Circuit avoidance strategy	Physical environment stress	037/0	023/0	334/0	739/0
	Job Conflict Stress	008/0-	005/0-	077/0-	939/0
	Stress ambiguity role	257/0-	117/0-	801/1-	073/0

coping strategies. Therefore, it is concluded that problem-oriented, emotion-oriented and avoidance-coping strategies with job stress control are able to predict changes in subjects' mental health. According to the results obtained in **table XIII**, the problem-solving strategy with an equivalent beta coefficient (β = -0.231) and a significant level (P = 0.001) can predict the mental health of the subject.

Emotional coping strategy with equivalent beta coefficient (β = 0.184) and significance level (P = 0.007) is able to predict the subjects' mental health. Also, avoidance coping strategy with equivalent beta coefficient (β = 0.022) and significance level (P = 0.728) is not able to predict the mental health of subjects.

Also, in this model, job stress with a beta coefficient of equal (β = 0.108) and a significant level (P = 0.116) is not able to predict the mental health of the subjects. Job stress is not significant on mental health. In order to investigate the predictive role of coping strategies on the mental health of subjects by controlling the dimensions of job stress, multiple regression analysis in a simultaneous manner was used, the results of the analysis in **tables XIV**.

As in **tables XIV**, based on the obtained results, the observed amount of F is significant (P = 0.0005) and can be 14.2% (R2adj = 0.142) variance of variable mental health of the subjects through Explained problem-

oriented, emotion-oriented, avoidance-oriented coping strategies, and dimensions of physical environment stress, job conflict, and role ambiguity stress.

Therefore, it is concluded that problem-oriented, emotion-oriented and avoidance-coping coping strategies by controlling the dimensions of job stress can predict changes in subjects' mental health. According to the results obtained in **table XV**, the problem-oriented coping strategy with equivalent beta coefficient (β = -0.217) and significance level (P = 0.002) and the emotion-coping coping strategy with Equivalent beta coefficient (β = 0.200) and significance level (P = 0.003) are able to predict the mental health of subjects. Also, avoidance coping strategy with equivalent beta coefficient (β = 0.026) and significance level (P = 0.728), physical environment stress with equivalent beta coefficient (β = -0.051) and significance level (454). P = 0.0), job conflict stress with equivalent beta coefficient (β = 0.118) and significance level (P = 0.071) and also in this model, role ambiguity stress with equivalent beta coefficient (β = 0.111) Significance level (P = 0.087) is not able to predict the mental health of subjects. In these cases, coping strategies have a relative mediation role as a mediator between the relationship between job stress dimensions and mental health. Findings related to mediation of coping strategies in relation to the dimensions of job stress and mental health are presented in detail in the following sections.

Table XII: Results of ANOVA for predicting mental health based on coping strategies with stress and job stress.

Source of dispersion	Total Squares	df	Average Square	R	R^2_{adj}	F	P
Regression	88/4048	4	96/16072	387/0	135/0	372/10	0005/0
Left over	87/23030	236	30/208				
Total	75/27079	240	-				

Table XIII: Regression analysis coefficients for predicting mental health based on coping strategies with stress and job stress.

Criterion variable	Predictive variables	B	β	t	P
Mental health	Problem-oriented strategy	286/0-	231/0-	387/3-	001/0
	Excitement strategy	187/0	184/0	736/2	007/0
	Circuit avoidance strategy	036/0	022/0	348/0	728/0
	Job stress	141/0	108/0	576/1	116/0

Table XIV: Results of ANOVA for predicting mental health based on coping strategies and dimensions of job stress.

Source of dispersion	Total Squares	df	Average Square	R	R^2_{adj}	F	P
Regression	62/4435	6	27/739	405/0	142/0	639/7	0005/0
Left over	13/22644	234	77/96				
Total	75/27079	240	-				

Table XV: Regression analysis coefficients for predicting mental health based on coping strategies and dimensions of job stress.

Criterion variable	Predictive variables	B	β	t	P
Mental health	Problem-oriented strategy	269/0-	217/0-	128/3-	002/0
	Excitement strategy	203/0	200/0	960/2	003/0
	Circuit avoidance strategy	041/0	026/0	398/0	691/0
	Physical environment stress	131/0-	051/0-	750/0-	454/0
	Job Conflict Stress	274/0	118/0	812/1	071/0
	Stress ambiguity role	389/0	111/0	721/1	087/0

The final research models

One of the important research questions is that job stress, along with which coping strategies, better predicts the mental health of employees? The results show a linear combination of job stress, problem-oriented stress coping strategy and emotion-oriented stress coping strategy predicts employees' mental health, which in Among these, job stress had both direct (P <0.01, β = 0.107) and indirect effects (P <0.01, β = 0.154) on mental health.

The results show a linear combination of dimensions of job conflict stress and role ambiguity, problem-oriented stress coping strategy and emotion-oriented stress coping strategy, predicting employees' mental health. They show that job stress has had a direct effect on mental health (P <0.01, β = 0.104) and an indirect effect (P <0.01, β = 0.075). The role of ambiguity stress also had a direct effect on mental health (P <0.01, β = 0.112) and an indirect effect (P <0.01, β = 0.096).

Finally, the main hypothesis of the research is the fourth hypothesis, which states that "coping strategies with stress play a mediating role in the relationship between job stress and mental health." Approved. Because by comparing the job stress path coefficients by reducing the direct path stress coefficients to mental health, the strategy variable Coping with stress (problem-oriented and emotion-oriented) is considered to mediate the relationship between job stress and mental health.

Also, by comparing the path coefficients of the dimensions of job stress (job conflict and role ambiguity), and by reducing the direct path coefficients of stress, job conflict to mental health and by reducing the direct path coefficients of stress, the ambiguity of the role to mental health, the variable of strategies to deal with stress (problem Orbital and emotion-oriented) are considered as mediators in the relationship between the dimensions of job stress (job conflict and role ambiguity) and mental health. Therefore, the main hypothesis of the research is confirmed and it is concluded that coping strategies have a mediating role in the relationship between job stress and mental health of employees.

Table XVI: Direct, indirect and significant total effects for the final modified model.

Variable	Direct effects	Interface variable (criterion)	Indirect effects	Total effects
Job stress	107/0	mental health	154/0	107/0
Job stress	373/0-	Problem-solving strategy	-	373/0-
Job stress	370/0	Exciting strategy	-	370/0
Problem-solving strategy	224/0-	mental health	-	224/0-
Exciting strategy	190/0	mental health	-	190/0

Table XVII: Direct, indirect and significant total effects for the final modified model.

Variable	Direct effects	Interface variable (criterion)	Indirect effects	Total effects
Job Conflict Stress	104/0	mental health	075/0	180/0
Job Conflict Stress	173/0-	Problem-solving strategy	-	173/0-
Job Conflict Stress	209/0	Exciting strategy	-	209/0
Stress ambiguity role	112/0	mental health	096/0	208/0
Stress ambiguity role	338/0-	Problem-solving strategy	-	338/0-
Stress ambiguity role	143/0	Exciting strategy	-	143/0
Problem-solving strategy	203/0-	mental health	-	203/0-
Exciting strategy	193/0	mental health	-	193/0

Table XVIII: Fitting of the final model, (N = 241).

Fit indicators		Admission scope	Calculated value
Chi-square of two models (df / CMIN)		3≥	274/2
Fit Goodness Index (GFI)		9/0≤	995/0
Adjusted Fit Goodness Index (AGFI)		9/0≤	953/0
Second Root Mean Mean Squared Error Squares (RMSEA)		09/0≥	073/0
Normalized Fit Index (NFI)		9/0≤	980/0
Comparative Brush Index (CFI)		9/0≤	988/0
Indicator HOELTRE	05/0	200≤	406
	01/0	200≤	701

Table XIX: Fitting of the final model (N = 241).

Fit indicators		Admission scope	Calculated value
Chi-square of two models (df / CMIN)		3≥	032/5
Fit Goodness Index (GFI)		9/0≤	992/0
Adjusted Fit Goodness Index (AGFI)		9/0≤	877/0
Second Root Mean Mean Squared Error Squares (RMSEA)		09/0≥	130/0
Normalized Fit Index (NFI)		9/0≤	953/0
Comparative Brush Index (CFI)		9/0≤	959/0
Indicator HOELTRE	05/0	200≤	184
	01/0	200≤	317

Fitting the final model

The ratio of chi-square to its degree of freedom (CMIN / Df) is one of the absolute equivalence indicators of the structural equation model. In this study, this ratio was calculated to be 2.274. Also, the major adaptive fit indices for a model are the good fit index (GFI), the adjusted fit good index (AGFI), the second root mean square error approximation index (RMSEA), the normalized fit index (NFI) and the brush index. All values related to the comparative index of the model also indicate the appropriate fit of the model in this study. Also, the CN barbell index at the alpha level of 0.05 in this study was 406 and at the alpha level of 0.01 in this study was calculated to be 701, which indicates the adequacy of the sample to refer to the relevant analyzes. According to the goodness of fit indicators, it can be said that the final model of this research has a good goodness of fit.

Discuss To explain this result, it can be said that job stress reduces the power of adaptation, the feeling of physical fatigue and the analysis of emotional resources in employed people, and this issue on the one hand negative, faulty or very personal reactions to the relationship. Follows other people in daily interactions and in the workplace (Story and Rapti, 2006) and on the other hand, if these conditions continue and negative and destructive feelings and emotions continue in the person, these emotions will target the mental health of the person. Will lead to reduced mental health.

In general, in explaining these results, it can be said that the stressors of the work environment such as lack of support resources, high workload, conflict with colleagues and facing the problems of clients, with increasing levels of anxiety, changes in Cardiovascular system, endocrine glands and immune system and decreased adaptive strength of individuals causing physical and mental fatigue, behavioral symptoms such as absenteeism, leaving work and increasing Accidents at work and the occurrence of psychological and physical symptoms such as depression, anxiety disorders, sleep disorders, gastrointestinal ulcers Hypertension, Heart Diseases Gastrointestinal Disorders, Headache, Respiratory Disorders and Skin Diseases Endangers the physical and mental health of employees. On the other hand, having mental health is one of the factors inhibiting the negative effects of job stress and one of the characteristics of people resistant to stressful events is having mental health.

In fact, it can be said that the lower the level of mental health of people, the more difficult it is to deal with job stress and its effects will be far more destructive. In another explanation of the results of the present study, according to Bandura (1996), when people are exposed to stress, those who find themselves empowered and efficient in the face of problems, make more efforts to deal with and cope with They do their problems, but people who find themselves helpless in the face of problems give in easily and feel depressed, anxious and frustrated.

In explaining the findings, problem-oriented strategy is a shield against stress for mental health due to finding the root cause of stress and dealing with it rationally, but emotion-oriented coping strategy temporarily reduces stress and or it just eliminates the symptoms of stress while the stressor is still present and its effects are likely to occur in other ways and elsewhere. In other words, problem-oriented coping strategies are cognitive methods for coping with problems. This finding shows that the use of rational approach to the stressors can estimate the level of mental health and therefore Using a problem-oriented coping strategy conveys a sense of control and mastery over the situation, which in turn affects the improvement of mental health. Also, using an emotion-oriented strategy modulates emotion and may eliminate the symptoms but does not eliminate the stressor, so it can inadvertently lead to health problems, so less use of this strategy can predict increased mental health.

Also, in another explanation of the findings of this study, it can be stated that effective coping methods lead to the modulation of stress and consequently increase the better performance of individuals. Since coping is problem-oriented, it is a logical way to find and deal with stress it can have a more lasting and effective effect on job performance, and this effect Positive can bring mental health to the employed person.

The results of this study show that mental health has a significant relationship with the strategies that people use to cope with their stress, it can be realized the importance of coping strategies in increasing and decreasing people's mental health. Findings showed that coping with the problem can be more effective and sustainable strategy due to a rational approach to the stressor or factors, but coping with the problem due to instability and temporary reduction of stress does not have such an effect.

Explaining this hypothesis, it has been found that choosing appropriate ways to deal with stress can reduce the impact of stress on mental health and lead to mental adjustment. On the other hand, in the theory of defense mechanisms, the method of coping has been treated as a personality trait which justifies the result obtained from this study. It can also be mentioned that according to the model of Folkman and Lazarus in the coping process, cognitive skills are used to solve the problem. The individual uses cognitive skills to solve problems by applying an effective problem-oriented coping style. Based on this, the ways to deal with the problem are directly examined and psychological satisfaction is usually obtained by finding appropriate solutions to the problem.

On the other hand, this situation causes mental order and cohesion and reduces emotional turmoil. The source

of stress is better identified and can be assessed as controllable due to the obtained mental cohesion and emotional calm. Knowing the source of control on the one hand and evaluating it controllably on the other hand helps to increase mental health. Recognizing the source of stress also increases confidence and anxiety by increasing self-confidence and improving mental health, resulting in increased job satisfaction. Conversely, the use of emotion-oriented strategy prevents the person from directly and effectively dealing with the problem and reduces his ability to solve the problem.

This condition disrupts mental cohesion and emotional turmoil and reduces mental health. Mental and emotional turmoil also undermines the ability to properly identify the source of stress and negatively affects mental health.

Therefore, it can be said that in the context of the relationship between coping strategies and mental health, it can be said that job stress in a two-way interaction is one of the results of selecting and using coping strategies effective and commensurate with change and stress. On the other hand, it creates a healthy psychological atmosphere in the light of which it is possible to correctly recognize and evaluate the stressful situation in order to choose an effective coping strategy, which makes the job satisfaction of the person not undergo negative changes.

As a result, the mental health of the person is not challenged. The results of the analysis showed that job stress can affect the mental health of employees in two ways: first, directly and secondly, through problem-oriented and emotion-oriented coping methods. The direct effect of job stress on mental health has been discussed in the previous explanations. However, in order to explain the mediating role of problem-oriented and emotion-oriented coping methods, the following materials are presented.

Explaining the mediating role of problem-oriented coping strategies in the relationship between job stress and mental health, it can be said that in people who use problem-oriented coping style, the level of stress is low and the level of stress is low. Emotions enable a person to better use cognitive and dynamic skills to deal with the problem in the shadow of peace of mind, and as a result, achieve greater satisfaction and achieve higher mental health. Also, in explaining this finding, it can be said that people who use problem-oriented coping style have low levels of stress, and low levels of emotional stress make a person better able to use cognitive skills in the shadow of peace of mind.

Use dynamism to deal with the problem and thus achieve greater satisfaction and higher mental health. Thus, the mediating role of problem-oriented coping style in the relationship between job stress and mental health is justified.

Also, in explaining the mediating role of emotion-coping strategies in the relationship between job stress and mental health, it can be said that emotion-coping is the best option to manage the response to stressors that people cannot. To control them, their use is inevitable in some situations, and it can be said that their use can be a way to escape the effects of stress; Because emotional coping seeks to reduce the negative emotions associated with stress to control their reactions, but these people do not try. Solve infrastructure problems or use a logical strategy. Therefore, the person has resorted to these strategies to reduce negative emotions and escape from stress, and on the other hand, the use of this strategy cannot be effective because the logic and cognition of the person has not yet been able to accept the stress of work and this causes health.

The person's psyche is challenged. On the other hand, denial and passivity are two characteristics of those who use the emotional coping style, denial of the stressful situation to avoidance behavior and passivity in the face of the stressful situation and inability to use potential abilities and The initiative of the person leads and by reducing the person's self-confidence increases the problems and dissatisfaction and thus reduces the mental health of the person, so the negative relationship between these two variables can be justified. Finally, considering the issues raised, predicting mental health with regard to the level of job stress and the use of problem-oriented and emotion-oriented coping strategies seems logical, but this fact is supported by the findings. Statistically, this study was confirmed.

Conclusion

The corona virus is becoming a global health crisis. The various aspects of the virus are still unknown to the public. This study aims to introduce the general aspects of this virus. This study is a narrative review that uses the keywords COVID-19 and New Coronavirus 2019 to review available texts. Published articles from 1/1/2020 to 3/3/2020 were reviewed. The search mainly used PubMed and Google Scholar. Free search in Google search engine is used to collect background information. Aspects of disease prevalence, control and prevention were studied and presented. This study showed that the routes of transmission of Covid-19 virus are through respiratory droplets and direct contact with secretions containing the virus. One of the causes of the uncontrolled and surprising prevalence of this disease is the long incubation period of the cause and how it is transmitted in the same asymptomatic, mild or pre-emergence periods. According to the study, the symptoms of the virus in people with chronic diseases such as cardiovascular disease, diabetes, cancer, high

blood pressure and chronic respiratory diseases are more severe and the risk of the virus increases with age and is still a definitive treatment.

Not discovered for it. The results showed that the epidemic of this new virus will continue for 3 months and according to prevention methods and management of effective factors in its transmission, it can be prevented. It should be noted that the proposed ways to treat this disease are also being researched and tested. Currently the only way to control coronavirus 19 is to maintain good personal hygiene, increase immunity and avoid crowding in crowded places. Regarding the effect of job stress on mental health, job stress has been introduced as one of the most important causes of mental disorders.

In most of these studies, stress is considered as a response that is directly experienced by stressful sources. The role of job stress in employees 'mental health agrees with the results of previous research in this field and shows that stress caused by working conditions has a significant effect on employees' mental health. Stress factors in the workplace reduce behavioral and physical symptoms and endanger his mental health.

According to what has been said, today job stress is known as one of the most important pests of organizations that on the one hand affects the physical and mental health of individuals and on the other hand can lead to other negative consequences and Most importantly, the stress on employees leads to a decline in the quality and quantity of services in the organization, which will have adverse effects on public health. Therefore, given that job stress is always present in different forms, using a permanent and effective method to deal with stress as

well as feeling understood and supported by others can affect their response to stress and as a result, controlling such situations will have an impact that will improve both job performance and employees' mental health.

Having mental health problems leads to dysfunction, decreased motivation, anxiety, fear and worry and causes a person to spend a significant part of their mental energy on such problems. As a result, it is certain that he will not have enough power and interest to work in the organization. Since human resources are one of the largest resources and assets of any organization, their health plays a decisive role in increasing productivity. Therefore, any planning and even investment in this sector that leads to maintaining and improving the health of employees, can ultimately lead to increased efficiency and be accompanied by a return on investment, so it is necessary to intervene that can improve Employees' mental health should be effective, planned and implemented periodically for employees to prevent mental health decline. Finally, as the findings of the present study showed, job stress is a cause of damage to health, and effective coping strategies such as problem-solving that leads to the modulation of job stress can be effective in maintaining and improving health. This finding shows that a person's mental health can be improved by increasing problem-oriented strategies through training in the use of these types of strategies as well as reducing their emotion-oriented strategies.

Conflict of interest

No conflict of interest

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